Aims and objectives

I. Radiological study on clavicle for age estimation
   - Evaluation of ossification stages of sternal ends of bilateral clavicles for bone age estimation by using spiral CT scan.
   - Suitability of CT scanning for age determination from clavicle and to find, how it may give better results than the existing techniques like conventional radiograph.

Parameters studied:
A. Age intervals corresponding to relative ossification stages in male and female subjects.
B. Comparison of age intervals at the first appearance and mean age of different ossification stages in male and female subjects.
C. Bilateral asymmetry in medial clavicular ossification stages found.

II. Technique specific parameters studied
Some specific parameters were also studied in addition to the study of age estimation (the main study), which are related to the technique used i.e. spiral CT for the purpose of age estimation from clavicular ossification and were found influencing the results as well as dose delivered to the patient.

A. Influence of slice thickness on interpretation of ossification stage.
   - It was aimed to determine the ideal slice thickness used in CT for medial clavicular ossification staging to achieve maximum accuracy in the results.
B. Comparative analysis of clavicular ossification staging as using CT and Digital X-ray

Aim –

- To compare the results of ossification stages using two radiological methods i.e. digital radiography and CT used in same subject at the same time and to discuss about the problems of using these methods and merits of one over the other.

- To find out the comparatively better technique for finding the accurate clavicular ossification status for performing forensic age diagnostics in living subjects above 18 years of age.

C. Reduction of dose with the employment of AEC technique in CT protocols for clavicular ossification staging

Aim –

- The employment of AEC technique (Care Dose 4D) in CT protocol for dose reduction as compared to fixed mAs technique.

- Reduction of doses without deteriorating image quality in CT scanning for estimating the age in case of young adults